Title (en)

DISPENSER FOR DISPENSING CRYOGENIC LIQUID

Publication

EP 0331287 B1 19920325 (EN)

Application

EP 89300891 A 19890130

Priority

GB 8804760 A 19880229

Abstract (en)

[origin: EP0331287A1] A dispenser for cryogenic liquid comprising a vacuum insulated vessel (2) which is provided with a dispenser tube (10). The dispenser tube (10) is heated in use by an electric heater (11). Sufficient heat is supplied to achieve film boiling on the inner surface of the dispenser tube (10). Flow of cryogenic liquid from the vacuum insulated vessel (2) into the dispenser tube (10) is controlled by a tapered valve member (14) which is biased downwardly by a spring (15) and which is connected to a permanent magnet (16) disposed in a coil (17). The tapered valve member (14) can be driven upwardly or downwardly according to the sense in which a direct current is applied to the coil (17). A gas relief tube (18) is provided to vent gas from the dispenser tube (10) intermediate the tapered valve member (14) and the outlet of the dispenser tube (10). The gas relief tube (18) conveys gas to the space above the cryogenic liquid, for example liquid nitrogen, in the vacuum insulated vessel (2). The dispenser has particular utility in high speed canning and bottling lines.

IPC 1-7

B65B 31/00; F17C 9/00

IPC 8 full level

B65B 31/00 (2006.01); **F17C 9/00** (2006.01)

CPC (source: EP KR US)

B65B 31/006 (2013.01 - EP US); **B67D 1/08** (2013.01 - KR); **F17C 9/00** (2013.01 - EP US); F17C 2203/0391 (2013.01 - EP US); F17C 2205/0332 (2013.01 - EP US); F17C 2221/014 (2013.01 - EP US); F17C 2223/0161 (2013.01 - EP US); F17C 2227/0304 (2013.01 - EP US); F17C 2250/0413 (2013.01 - EP US); F17C 2260/024 (2013.01 - EP US)

Cited by

CN103438263A; AU662092B2; US5465582A; EP0893395A1; FR2765655A1; US6098674A

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